Testimony of

Randy Howard

General Manager

Northern California Power Agency (NCPA)

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"Opportunities and Challenges for Hydropower"

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I am Randy Howard, General Manager of the Northern California Power Agency (NCPA). I have more than 30 years of experience working in the utility industry and with hydropower projects. NCPA is a joint powers authority providing wholesale electric power and other services to 15 public power systems in Northern California serving approximately 680,000 customers. Our members—large and small, rural and urban—have banded together to build a variety of generation resources, including the North Fork Stanislaus River Hydroelectric Development Project.

Hydropower—as a renewable, carbon-free and flexible energy resource—has numerous operational and environmental benefits. Despite these benefits, the regulatory process for hydropower projects is cumbersome, costly and a deterrent for building and utilizing this important domestic energy source. The challenge isn't once every 30 or 50 years at the licensing window; it is throughout the operating license term with regulatory hurdles and impediments that undermine effective project operations, create regulatory uncertainty, hinder efficiency upgrades, and burden the projects with unnecessary costs.

Congress has an opportunity to review and update the regulatory policies to retain and expand the benefits of our nation's hydropower resources.

NCPA's North Fork Stanislaus River Hydroelectric Development Project

The North Fork Stanislaus River Hydroelectric Development Project is a series of dams, conduits and powerhouses spanning 60 miles on the western slope of the Sierra Nevada range, between Lake Tahoe and Yosemite Valley. The project—with a combined generating capacity of 259 MW—was licensed in February 1982 and began commercial operation in 1990. It was the last large-scale hydro project constructed in California.

As NCPA members move towards greater reliance on intermittent renewable resources to meet the state's renewable energy goals, NCPA's hydro project—and other hydro resources in the state—provide an increasingly essential service in integrating renewables, providing critical load following, supporting grid reliability and emissions goals, and providing in-stream water for fish survival during California's extended drought periods.

Hydropower's unique attributes are vital in ensuring a reliable, resilient, cost-effective, and environmentally benign energy portfolio:

- *Hydropower's operational flexibility is critical to system reliability*. Output from the state's hydropower resources can quickly be adjusted to provide voltage support, synchronization, and fast-start response and ramping to keep the power system in balance;
- *Hydropower projects are easily dispatchable.* This operational flexibility plays an essential role in integrating a growing fleet of intermittent renewable resources such as solar and wind; and
- *As an emission-free resource, hydropower reduces greenhouse gas emissions and the need to construct more combustion turbine generators*.

Licensing Process is Cumbersome and Costly

As others will testify, the process for licensing and relicensing non-federal hydropower projects is unnecessarily cumbersome and costly. Compared to a natural gas plant, hydropower projects must overcome higher capital requirements and longer construction schedules. But the current regulatory process has unnecessarily added considerable reviews, costs, delays, and changing environmental uncertainty. Based on the experience of other project licensees, we predict that relicensing the project will take thousands of internal labor hours, a minimum of 10 years, and cost exceeding $50 million. That is for a well operated existing hydroelectric plant.

This broken system has a number of contributing factors:

- While we talk about "FERC licensing," in reality there can be numerous federal and state agencies conducting independent and overlapping reviews and permit processes;
- These multiple reviews lack coordination, and no one entity is empowered to manage and enforce a permitting schedule, harmonize environmental reviews or resolve conflicting agency requirements;
- Other federal agencies are discouraged from participating directly in the FERC processes for fear that ex parte restrictions will hinder their decisions in their own regulatory review; and
- Licensees are unable to facilitate agency studies and decisions through direct funding.

This unwieldy process would be streamlined and improved under the hydropower legislation that was included in the energy bill under consideration last Congress.

On-going Operations Are Also Cumbersome

The challenges faced by project licensees don't end once the permit is issued. Project operations and maintenance require continued engagement with federal and state resource managers on water releases, fish measures and more. As well, NCPA's experience underscores the need for steps to fundamentally alter the relationship with federal land managers to create a cooperative, mutually beneficial partnership.

NCPA's project is surrounded by United States Forest Service (Forest Service) lands. This geographic reality has created numerous challenges.

For years, forest management practices, rain and erosion activity, have caused landslides on Forest Service lands upstream of our dams that have deposited tons of sediment into our reservoirs. The severe winter storms we just experienced have dramatically increased the sediment deposits, as well as beetle-infested trees and forest debris, now trapped behind our dams. The sediment build up is so bad at one of our dams that it impedes the intake structure and we cannot pass water to generate power.

From our perspective, the solutions are simple. The sediment and material originated on Forest Service lands and should be redeposited on Forest Service lands. Not only would this reduce large-haul truck traffic through the forest and provide an economic option for NCPA, it could also benefit the Forest Service. The sediment could be used for road repairs, soil enrichment, meadow restoration, and fire breaks, creating a more sustainable forest.

Regrettably, this "simple" solution isn't so simple. There is confusion with the Forest Service Districts whether current rules allow such agreements. NCPA has been told that the permitting system favors removal of the sediment to a private disposal site—even though those options are far more expensive, add substantial transportation emissions, impacts already damaged remote roads, and could deny the Forest Service the beneficial use of the material.

Another challenge we face is accessing our projects to address the sediment and debris. This winter, over 50 storm related areas of road damage have been identified in the Stanislaus National Forest. There are probably at least double that number in areas that are currently inaccessible due to snow. The Forest Service is completely dependent on Federal Highway Administration ERFO funding requests for these repairs. Two of the identified 50 problems are on the Beaver Creek Road adjacent to our Beaver Creek Dam. The Forest Service is estimating that one landslide on this road will cost $1M to repair. At the same time, the Forest Service engineering and road maintenance staff is extremely short handed.

Improving the Process

We believe that the process can be improved, but it requires changes in operational alignment, resources, and tools.

The first "reform" does not require new legislation or regulations. Rather, it is about changing the operational alignment of the Forest Service and the relationship between the agency and licensees.

As part of the license, NCPA provides numerous benefits to the Forest Service, including camping, boating, day-use recreational facilities, wildlife management and mitigation funding, fishing opportunities, and additional support. While this relationship provides both sides with benefits, we believe that the relationship between the agency and licensees needs to be restructured and viewed as a partnership for the duration of the FERC license. While the decentralized decision-making structure of the Forest Service enables some districts to forge partnerships, everyone would benefit if there was greater legislative direction to encourage the needed partnerships while retaining the agency's core objectives. The same operational rigidity exists at other federal agencies as well.

We also believe licensees should be able to secure programmatic approval for recurring maintenance activities. Such an approach could help alleviate some of the administrative burden resulting from the current practice of viewing maintenance projects at existing hydroelectric facilities as new and discreet projects requiring full—and redundant—review and permitting. The last NCPA permit to remove sediment from one of our reservoirs took approximately two years to get through all of the required reviews and approvals by ten different federal and state agencies, a process that we are going through again now, and will undoubtedly need to repeat additional times over the course of the license term, just to conduct routine, reoccurring maintenance. Operational rigidity interferes with finding creative, mutually beneficial solutions that keep this important resource working for the consumers.

We also need to address the resource shortage the Forest Service faces. Last year's hydropower reform legislation sought to improve cooperation between licensees and resource agencies during the licensing process by authorizing third-party funding of environmental studies. While licensees pay a fee to FERC to fund agencies' studies, the way the federal budget appropriations works, those funds are often not received by the local or regional office tasked with the support.

Conclusion

Hydropower is a tremendous domestic energy resource, but it is hindered by a regulatory system that unnecessarily impedes and diminishes its value. NCPA encourages Congress to expeditiously enact bipartisan legislation to streamline the hydroelectric licensing process.

In addition, we encourage this Committee to support efforts to forge operational partnerships between licensees and federal resource agencies, dispose of regulatory rigidity that impedes mutually beneficial solutions, and enable licensees to directly fund—on a voluntary basis—needed works on adjacent federal lands.